

IN THE CLAIMS:

1. (currently amended) A method for reconstructing an image of an object in a computed tomographic imaging system, said method comprising:

scanning an object using a computed tomographic (CT) imaging apparatus to acquire projections of the object;

determining, utilizing the projections, a set of thresholds;

scaling ~~and prepping~~ the projections by multiplying the projections with a constant value;

associating selected smoothing kernels with the thresholds;

utilizing, via the computed tomographic imaging system, the smoothing kernels and the projections to produce projections smoothed in three dimensions in accordance with the thresholds such that when a first threshold of the set of thresholds is triggered smoothing in three dimensions is performed and when the first threshold is not triggered smoothing in three dimensions is not performed; and

filtering and backprojecting the projections to generate an image of the object in the computed tomographic imaging system.

2. (previously presented) A method in accordance with Claim 1 wherein said determining, utilizing the projections, a set of thresholds comprises determining a set of four thresholds including a high threshold, a medium threshold, a low threshold, and a very low threshold, and wherein one of the smoothing kernels is associated with each of the thresholds.

3. (previously presented) A method in accordance with Claim 2 wherein a one-to-one correspondence exists between the smoothing kernels and the thresholds.

4. (canceled)

5. (previously presented) A method in accordance with Claim 1 wherein said utilizing, via the computed tomographic imaging system, the smoothing kernels and the projections comprises utilizing a smoothing gain factor to modulate smoothing of the smoothed projections.

6. (previously presented) A method in accordance with Claim 5 wherein the smoothing gain factor is a function of the projections.

7.–14. (canceled)

15. (currently amended) A CT imaging apparatus comprising:

a detector;

a source configured to project a beam of x-rays toward said detector; and

a computer system operatively coupled to at least one of said detector and said source, said computer system comprising:

a first module configured to scan an object to acquire projections of the object and to scale ~~and prep~~ the projections by multiplying the projections with a constant value;

a second module configured to determine, utilizing the projections, a set of thresholds;

a third module configured to associate selected smoothing kernels with the thresholds;

a fourth module configured to utilize the smoothing kernels and the projections to produce projections smoothed in three dimensions in accordance with the thresholds such that when a first threshold of the set of thresholds is triggered smoothing in three dimensions is performed and when the first threshold is not triggered smoothing in three dimensions is not performed; and

a fifth module configured to filter and backproject the projections to generate an image of the object.

16. (previously presented) An apparatus in accordance with Claim 15 wherein, to determine, utilizing the projections, the set of thresholds, said second module is configured to determine a set of four thresholds including a high threshold, a medium threshold, a low threshold, and a very low threshold and to associate one of the smoothing kernels with each of the thresholds.

17. (previously presented) An apparatus in accordance with Claim 16 wherein the smoothing kernels and the thresholds exist in one-to-one correspondence.

18. (canceled)

19. (previously presented) An apparatus in accordance with Claim 15 wherein, to utilize the smoothing kernels and the projections to produce the projections smoothed in three dimensions, said fourth module is configured to utilize a smoothing gain factor to modulate smoothing of the smoothed projections.

20. (previously presented) An apparatus in accordance with Claim 19 wherein the smoothing gain factor is a function of the projections.

21.-28. (canceled)

29. (currently amended) A non-transitory computer storage medium comprising instructions thereon, said instructions configured to instruct a computer to:

determine, utilizing projections obtained by scanning an object, a set of thresholds;

scale ~~and prep~~ the projections by multiplying the projections with a constant value;

associate selected smoothing kernels with the thresholds;

utilize the smoothing kernels and the projections to produce projections smoothed in three dimensions in accordance with the thresholds such that when a first threshold of

the set of thresholds is triggered smoothing in three dimensions is performed and when the first threshold is not triggered smoothing in three dimensions is not performed; and

filter and backproject the projections to generate an image of the object.

30. (currently amended) A non-transitory computer storage medium in accordance with Claim 29 wherein, to determine, utilizing projections obtained by scanning an object, the set of thresholds, said instructions are further configured to instruct the computer to determine a set of four thresholds including a high threshold, a medium threshold, a low threshold, and a very low threshold and to associate one of the smoothing kernels with each of the thresholds.

31. (currently amended) A non-transitory computer storage medium in accordance with Claim 30 wherein the smoothing kernels and the thresholds exist in one-to-one correspondence.

32. (canceled)

33. (currently amended) A non-transitory computer storage medium in accordance with Claim 29 wherein, to utilize the smoothing kernels and the projections to produce the projections smoothed in three dimensions, said instructions are further configured to instruct the computer to utilize a smoothing gain factor to modulate smoothing of the smoothed projections.

34. (currently amended) A non-transitory computer storage medium in accordance with Claim 33 wherein the smoothing gain factor is a function of the projections.

35.-42. (canceled)